



## DEVELOPMENT OF AN EDUCATIONAL MOBILE QUIZ GAME FOR PHYSICS

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### ABSTRACT

This experimental research study aims to create a mobile quiz game that teaches physics effectively. To accomplish this, the researchers leveraged the C# as a programming language and Unity as a game engine, known for its cross-platform compatibility and flexibility. The development process involved several key stages: downloading of software, starting of code, code testing and debugging, data collection, data integration and testing, graphic designing, sound design, final testing and rendering/building. Key tools used included Unity, Visual Studio Code, and Adobe Photoshop, allowing for an interactive game design process. The final product is a physics quiz game designed to engage students in learning basic physics concepts through a gamified approach. During testing, the researchers ensured the game's accuracy, functionality, and visual appeal, incorporating elements like score tracking to encourage user competition and collaboration, and difficulty level to challenge user knowledge and understanding. Sound and

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# INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue IV

May 2024

Available online at <https://www.instabrightgazette.com>



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visual effects were carefully integrated to enhance the overall user experience. The resulting mobile quiz game offers a low-spec, engaging, and dynamic educational tool for students to review and reinforce their physics knowledge. The use of gamification in physics education represents a promising pathway toward more effective and enjoyable learning outcomes. Future studies could build on this research by exploring additional features, addressing aspect ratio compatibility across various devices, and further enhancing gameplay mechanics to optimize the learning experience. This innovative approach to physics education has the potential to positively impact both students and educators, offering a more interactive and entertaining method for learning complex concepts.

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